

IN THE CLAIMS

Please amend the claims to read as indicated below.

1. (Currently Amended) A method for optical excitation of a sample via a two color (two-photon) absorption process comprising:

(a) exciting the sample with two a first wavelengths-wavelength of light, and a second wavelength of light, causing the sample to emit light of distinctive emission characteristics or to change other optical properties;

(b) generating the two-excitation-wavelengths first wavelength of light and the second wavelength of light from a single light source, subjected to a Raman shifter, wherein the single light source is a laser beam, wherein the laser beam is adjusted by a laser polarizer and a diaphragm;

(c) collimating an output from the Raman shifter with a lens, a first dichroic mirror associated with a first beam dump, and a second dichroic mirror associated with a second beam dump;

(d) dispersing the output from the Raman shifter though a first Pellin-Broca prism and a second Pellin-Broca prism resulting in a first confocal excitation beam having the first wavelength of light and a second confocal excitation beam having the second wavelength of light;

(e) directing the first confocal excitation beam and the second confocal excitation beam to the sample by mirrors; and

e)(f) detecting the emitted light or the an optical property change from the sample;

(d) moving the sample a pre-determined distance;

e) repeating steps (a) to (d) a predetermined number of times thereby creating a multitude of representations of the excitation light spots;

2. (Canceled)

3. (Canceled)

4. (Canceled)

5. (Canceled)

6. (Canceled)

7. (Currently Amended) The method as in claim 1, wherein the sample emits a light of distinctive emission characteristics selected from the group consisting of: is-fluorescence, phosphorescence and Raman.

8. (Canceled)

9. (Canceled)

10. (Canceled)

11. (Canceled)

12. (Currently Amended) The method as in claim ~~11~~ 1, ~~where~~ wherein the laser is a high-peak power pulsed laser.

13. (Currently Amended) The method as in claim ~~11~~ 1, wherein the Raman cell shifter is filled with a Raman medium, and wherein the Raman medium is a gas selected from the group consisting of hydrogen, methane, and deuterium.

14. (Canceled)

15. (Canceled)

16. (Canceled)

17. (Canceled)

18. (Currently Amended) The method as in claim 1, wherein the sample has an emitted light luminescence, a surface reflected light or a refractive index change that is detected using a CCD camera, a photomultiplier tube or a photodiode.

19. (Canceled)

20. (Currently Amended) The method as in claim 1, further comprising: ~~wherein moving~~ the sample is ~~moved at a~~ pre-determined distance of ~~5 microns or less~~; and repeating steps (a) to (f) a predetermined number of times thereby creating a multitude of representations of the excitation lights.

21. (Canceled)

22. (Original) An apparatus for the optical excitation of a sample comprising of a light source, an excitable sample, two confocal excitation beams of two different wavelengths, a photodetector to detect the signal, a sample holder, and a mechanism to move the holder in three possible orthogonal directions.

23. (Original) The apparatus as in claim 22, wherein the light source is a Raman shifter.

24. (Canceled)

25. (New) The method as in claim 1, wherein the first confocal excitation beam and the second confocal excitation beam are varied in excitation energy by a polarizer.

26. (New) The apparatus of claim 22, wherein the two confocal excitation beams originate from a single laser beam subjected to a Raman shifter.

27. (New) The apparatus of claim 22, wherein, when the two confocal excitation beams are present on the excitable sample, the excitable sample generates the signal.